

AMENDMENTS TO THE CLAIMS

1. (Previously presented) A microfluidic device comprising a microfluidic network, the device comprising:

an input port for receiving a particle-containing liquidic sample;

a retention member in communication with the input port and configured to spatially separate particles of the particle-containing liquidic sample from a first liquidic portion of the particle-containing liquidic sample;

a reservoir in communication with the retention member and configured to receive at least some of the first liquidic portion separated from the particles, wherein a pressure within the reservoir increases upon receiving the first liquidic portion; and

a gate configured to open a channel downstream of the reservoir thereby decreasing the pressure within the reservoir so that at least some of the separated particles recombine with a subset of the first liquidic portion separated from the particles.

2. (Cancelled)

3. (Previously presented) The microfluidic device of claim 1, wherein a ratio of a volume of the subset of the first liquidic portion to a volume of the first liquidic portion is at least 1%.

4. (Previously presented) The microfluidic device of claim 1, wherein a ratio of a volume of the subset of the first liquidic portion to a volume of the first liquidic portion is less than 25%.

5. (Original) The microfluidic device of claim 1, wherein the retention member is a filter.

6-8. (Cancelled)

9. (Previously presented) A microfluidic device for processing a particle-containing liquid sample, including:

an enrichment region, including:

a retention member;

a reservoir in communication with the retention member configured so that a first liquidic portion of a particle-containing liquid sample received therein enters the reservoir along an entry path including a first surface of the retention

member, and particles of the particle-containing liquid sample are thereby retained by the retention member; and

a gate having an open configuration wherein a subset of the first liquidic portion exits the reservoir along an exit path including the first surface of the retention member, wherein the entry path is substantially opposite the exit path.

10-21. (Cancelled)